



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/426,654	10/25/1999	KENJI NEMOTO	FUJR-16.535	2188

7590 07/30/2003

Katten Muchin Zavis Rosenman  
575 Madison Avenue  
New York, NY 10022

[REDACTED] EXAMINER

PEREZ GUTIERREZ, RAFAEL

ART UNIT	PAPER NUMBER
[REDACTED]	2686

DATE MAILED: 07/30/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No. 09/426,654	Applicant(s) Nemoto
Examiner Rafael Perez-Gutierrez	Art Unit 2686

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

1)  Responsive to communication(s) filed on May 6, 2003.

2a)  This action is FINAL. 2b)  This action is non-final.

3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

### Disposition of Claims

4)  Claim(s) 1-15 is/are pending in the application.

4a) Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5)  Claim(s) \_\_\_\_\_ is/are allowed.

6)  Claim(s) 1-15 is/are rejected.

7)  Claim(s) \_\_\_\_\_ is/are objected to.

8)  Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

9)  The specification is objected to by the Examiner.

10)  The drawing(s) filed on \_\_\_\_\_ is/are a)  accepted or b)  objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)  The proposed drawing correction filed on \_\_\_\_\_ is: a)  approved b)  disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)  The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

13)  Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)  All b)  Some\* c)  None of:

- Certified copies of the priority documents have been received.
- Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
- Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\*See the attached detailed Office action for a list of the certified copies not received.

14)  Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

a)  The translation of the foreign language provisional application has been received.

15)  Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                              | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)          | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ | 6) <input type="checkbox"/> Other: _____                                    |

Art Unit: 2686

## **DETAILED ACTION**

1. This Action is in response to Applicant's amendment filed on May 6, 2003. **Claims 1-15** are still pending in the present application. **This action is made FINAL.**

### ***Claim Objections***

2. **Claim 14** is objected to because of the following informality: On **line 2 of claim 14**, insert --a-- before "signal". Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

**Claims 9-15** are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor, at the time the application was filed, had possession of the claimed invention.

Consider **claims 9, 13, 14, and 15**, the addition of the limitation of the radio wave propagation information being radio wave **uplink and downlink** propagation information in

Art Unit: 2686

claims 9, 14, and 15, and the addition of the limitation of **roundtrip** radio wave propagation in claim 13 raises a new matter issue in the present application because the specification does not specifically describes or discloses that the radio wave propagation information includes uplink and downlink propagation information or that is based on the roundtrip of the radio wave. The specification broadly recites radio wave propagation and nowhere on the specification it is mentioned that the transmission timing is based on radio wave **uplink and downlink** propagation information or on radio wave **roundtrip** propagation. Applicant claimed that support for those features are found on page 20 starting at line 9, however, citations from then on only recite that the transmission timing is based on radio wave propagation information not on **uplink and downlink** radio wave propagation information as claimed. Moreover, the words uplink, downlink, and roundtrip are not even mentioned in the specification. Applicant is welcomed to point out where in the specification the Examiner can find support for those features if Applicant believes otherwise.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office Action:

A person shall be entitled to a patent unless -- (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

Art Unit: 2686

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

5. **Claims 1, 2, and 5-8** are rejected under 35 U.S.C. 102(e) as being anticipated by **Yoshida et al. (U.S. Patent # 6,233,257 B1)**, as applied in the first Office Action.

Consider **claims 1 and 5-7**, Yoshida et al. clearly show and disclose a wireless local loop (WLL) system 50 (radio communication system) (figure 1A) and method for performing radio communication control having frames 200, 202 with a plurality of transmit and receive time slots (T1-T4 and R1-R4) (figures 2A and 2B), comprising:

a propagation information calculation device (not shown but inherent) arranged in radio base station 100 (figure 1A) and including continuous time slot allocating means (not shown but inherent) for allocating to a WLL personal station 102 (terminal unit) (figure 1A) more than one transmit time slot T1-T4 and more than one receive time slot R1-R4 in a frame 200, 202 (figures 2A-3B) to generate a continuous transmit time slot (i.e., time slot 204 with guard time 302) (figure 3A) and a continuous receive time slot (i.e., time slot 212 with guard time 320) (figure 3B) for the WLL personal station 102 (terminal unit) (figure 1A) (column 4 lines 12-16, column 4 line 54 - column 5 line 29, and column 6 lines 38-48) and propagation information calculating

Art Unit: 2686

means (not shown but inherent) for communicating with the WLL personal station 102 (terminal unit) (figure 1A) during a period of the continuous time slot to calculate propagation information about radio wave propagation between radio base station 100 and the WLL personal station 102 (terminal unit) (figure 1A) (abstract, figure 4A steps 412-416 414, figure 4B steps 432-436, figure 4C steps 412, 414, 454, and 456, column 2 lines 11-34, column 6 lines 19-37, column 8 line 48 - column 9 line 8, column 9 lines 30-52, and column 10 lines 3-14); and

a transmission timing calculation device (not shown but inherent) arranged in the WLL personal station 102 (terminal unit) (figure 1A) and including a transmission timing calculating means (not shown but inherent) for calculating, during the period of the continuous time slot and based on the propagation information, transmission timing for a signal to be transmitted from the WLL personal station 102 (terminal unit) to the radio base station 100 (figure 1A) (abstract, figure 4B steps 436 and 438, figure 4C steps 454-458, column 4 lines 23-28, column 9 lines 43-52, and column 10 lines 3-23) and signal transmitting means (not shown but inherent) for transmitting the signal in accordance with the transmission timing (abstract, step 418 in figures 4A and 4B, figure 4C step 460, column 3 lines 54-57, column 9 lines 53-58, and column 10 lines 23-28).

Consider **claims 2 and 8, and as applied to claims 1 and 7 above**, Yoshida et al. further disclose that, to calculate the propagation information, the propagation information calculating device (not shown but inherent) measures a time from transmission of control data (test data) to the WLL personal station 102 (terminal unit) (figure 1A) to reception of the control data (test

Art Unit: 2686

data) returned from the WLL personal station 102 (terminal unit) (figure 1A) and calculates a radio wave propagation time or distance between the radio base station and the WLL personal station 102 (terminal unit) (abstract, figures 1A and 4A-4C, and column 6 lines 19-37).

6. **Claims 9-15** are rejected under 35 U.S.C. 102(e) as being anticipated by **Goldman (U.S. Patent # 6,016,322)**, as applied in the first Office Action.

Consider **claims 9-11 and 13-15**, Goldman clearly shows and discloses a radio communication method and system 200 (figure 2) for performing radio communication control, comprising:

a base station location information acquisition device arranged in a radio base station 206 (figure 2) and including a Global Positioning System (GPS) (satellite-assisted positioning system) (column 3 lines 10-13) receiver 208 (base station location information acquiring means) (figure 2) for acquiring base station location information which is information on a location of the radio base station 206 (column 3 lines 31-43), and a base station location information notifying means (combination of processing unit 213 and transmitter 214) (figure 2) for notifying the base station location information to a mobile station 204 (terminal unit) (figures 2 and 7A, column 4 lines 36-52, column 5 lines 21-30, and column 6 lines 29-42); and

a transmission timing calculation device arranged in the mobile station 204 (terminal unit) (figure 2) and including a Global Positioning System (GPS) (satellite-assisted positioning system) (column 3 lines 10-13) receiver 208 (terminal location information acquiring means)

Art Unit: 2686

(figure 2) for acquiring mobile station (terminal unit) location information which is information on a location of the mobile station 204 (terminal unit) (column 3 lines 31-43), a processing unit 212 (propagation information calculating means, transmission timing calculating means) (figures 2 and 3A) for calculating, based on the base station location information and the mobile station (terminal unit) location information, propagation information about radio wave propagation between the radio base station 206 and the mobile station 204 (terminal unit) (i.e., downlink and uplink) and calculating, based on the propagation information, transmission timing for a signal to be transmitted from the mobile station 204 (terminal unit) to the radio base station 206 (abstract, figure 6, column 2 lines 14-34, column 4 lines 14-35, column 5 lines 6-30, and column 5 line 53 - column 6 line 28), and a transmitter 214 (signal transmitting means) (figure 2) for transmitting the signal in accordance with the transmission timing (column 6 lines 19-28), wherein the signal timing is adjusted for a roundtrip radio wave propagation based on the notified base station location information and terminal location information (figure 6, column 2 lines 14-34, column 4 lines 14-35, column 5 lines 6-30, and column 5 line 53 - column 6 line 28).

Consider **claim 12**, and as applied to claim 9 above, Goldman further discloses that said transmission timing calculation device stores information on the calculated transmission timing in a non-volatile memory 304 (figure 3A, column 4 lines 18-35, and column 6 lines 20-22).

Art Unit: 2686

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office Action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. **Claims 3 and 4** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Yoshida et al. (U.S. Patent # 6,233,257 B1)**, as applied in the first Office Action.

Consider **claim 3**, and as applied to **claim 1 above**, Yoshida et al. also disclose that the transmission timing calculating device (not shown) stores, in some kind of memory device, information on the calculated transmission timing (abstract and column 2 lines 33-35).

Although, Yoshida et al. do not specifically disclose that the information is stored in a nonvolatile memory, the Examiner takes Official Notice that it is notoriously well known in the art to use a nonvolatile memory to permanently store information that is used frequently.

Art Unit: 2686

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to specifically use a nonvolatile memory in Yoshida et al. to store the information on the calculated transmission timing in order to permanently store such information and reduce the system's processing time.

Consider **claim 4**, and as applied to **claim 1 above**, although Yoshida et al. does not disclose that the continuous time slot allocating means (not shown but inherent) cancels allocation of the continuous time slot after the transmission timing is calculated, a person of ordinary skill in the art at the time the invention was made would have clearly recognized that, by canceling the allocation of the continuous time slot after the transmission timing is calculated, substantial resources can be reused for increasing the capacity of the system.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to cancel the allocation of the continuous time slot after the transmission timing is calculated in order to reused resources to increase the capacity of the system.

#### *Response to Arguments*

9. Applicant's arguments filed on May 6, 2003 have been fully considered but they are not persuasive.

In the present application, Applicant argues on page 12 of the remarks, that Yoshida does not suggest allocating to a terminal unit **more than one transmit time slot and more than one**

Art Unit: 2686

**receive time slot** in a frame to generate a continuous transmit time slot and a continuous receive time slot for the terminal unit.

The Examiner respectfully disagrees with Applicant's argument because:

a) Yoshida et al., given the broadest reasonable interpretation of the above language, clearly teach more than one transmit time slot and more than one receive time slot when he disclose that the transmission time slot allocated to the terminal unit comprises time slot 204 and guard time 302 which is more than one transmit time slot (figure 3A and column 6 lines 38-57) and the reception time slot allocated to the terminal unit comprises time slot 212 and guard time 320 which is more than one receive time slot (figure 3B and column 6 line 58 - column 7 line 7); and

b) the teachings of Yoshida et al., specifically the time slot being a combination of a time slot and guard time, clearly meet Applicant's definition, on page 7 lines 22-25 and page 9 lines 11-16 of the specification, of a continuous time slot (i.e., a combination of a control time slot and expanded guard bits).

### ***Conclusion***

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office Action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

Art Unit: 2686

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

11. Any response to this Office Action should be **faxed to (703) 872-9314 or mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

**Hand-delivered responses** should be brought to

Crystal Park II  
2021 Crystal Drive  
Arlington, VA 22202  
Sixth Floor (Receptionist)

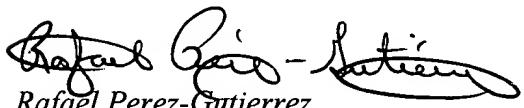
12. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Rafael Perez-Gutierrez whose telephone number is (703) 308-

Art Unit: 2686

8996. The Examiner can normally be reached on Monday-Thursday from 6:30am to 5:00pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Marsha D. Banks-Harold can be reached on (703) 305-4379. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700 or call customer service at (703) 306-0377.

  
Rafael Perez-Gutierrez  
R.P.G./rpg   **RAFAEL PEREZ-GUTIERREZ**  
**PATENT EXAMINER**

July 25, 2003

  
Marsha D. Banks-Harold  
MARSHA D. BANKS-HAROLD  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600